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ABSTRACT

This presentation focuses on the connection between the cognitive, affective and physical domains in learning behavior and emphasizes aesthetic experiences in early childhood education, with particular reference to physical movement and music. (RH)

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THE LEARNING CONNECTION: MOVEMENT AND MUSIC

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At this conference, early childhood educators from all over the world, emphasizing research as well as practical procedures, are gathered to exchange ideas. Universal theories of development, including historical trends, are complemented by such practical considerations as the parents' role in the child's language development. We've heard vivid descriptions of novel strategies and group settings for stimulating infants' learning, and so on and on. But whatever the focus of individual presenters, we surely agree: The maximum physical-affective-cognitive development of the child is our overwhelming concern. Although I titled my session "The Learning Connection: Movement and Music," I now realize that two other learning connections demand prior consideration: One is the connection of the cognitive, affective and physical aspects of the child's development; the other is the connection of the separate parts of the brain.

Benjamin Bloom, analyzing learning objectives with his colleagues in 1964, insisted that "the cognitive and affective domains are tightly intertwined." I must expand that statement, for I am convinced, the cognitive, affective and physical domains are tightly intertwined! The young child constantly demonstrates the interdependence of these modes--

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all three of them. He especially shows the importance, to him, of physical manipulation, of the exploration of his environment through his senses.

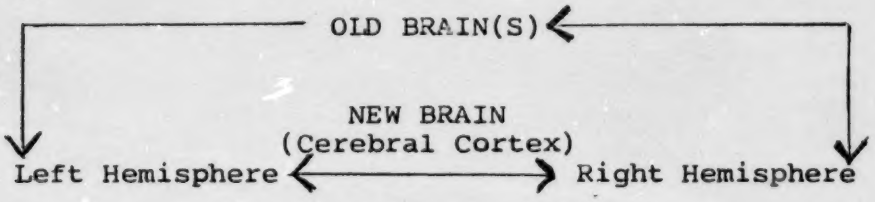
Richard Held, through carefully controlled experiments, clarifies certain aspects of perception and adaptation that cause changes in behavior (change in behavior equals learning) showing that the muscles and motor parts of the individual's nervous system must be involved. The adaptation is not just a change in processing of incoming data from the eyes and the ears; the information must be drawn from the child's contact with the environment. This learning phenomenon, called reafference, clarifies how learning can result from the child's physical enactment of the on-going stimulus. It is interesting to note that enactive is the term Jerome Bruner uses to describe one mode of knowing.

Finally, in this regard, the prevailing use of psycho-motor in experimental and descriptive research underscores the relatedness of the domains. I looked up psyche in my Webster's Unabridged: "psyche: the spiritual as distinct from the body, both in nature and in destiny; also, the mind; the mental life of an individual comprising intellectual, emotional, and impulsive activities and predispositions." With this definition, psycho-motor characterizes this first important learning connection.

Now to the learning connection between the two hemispheres of the brain. Scientific as well as popular journals everywhere are featuring explanations of the bilaterality

of the "new" brain. All of the evidence seems to confirm the presence of a fundamental difference in the ways in which the right and left hemispheres perceive the world, and more especially, the contrasting ways in which they process incoming data. They have different sets of information-processing rules.

Thomas Regelski provides a clear diagram of the findings to date.



The old brain controls instincts intuitions, emotions, sexual impulses, survival, situational arousal states, motivational impulses of a noncognitive nonverbal sort; it controls the automatic behaviors and functions. (Some people call this the "animal brain.") The arrow in Regelski's diagram leads us to the left hemisphere of the new brain, the cerebral cortex. Here he lists:

A. Self-awareness, verbal conception, conscious ideas and understanding;

B. Is analytic, specialized, relatively slow reacting and dependent on linear time for its specialized processing;

C. Speech, reason, logic, deduction analysis, symbol systems.

The next of Regelski's arrows points to and from the right hemisphere. The connection is the corpus callosum.

Charactistics of the right hemisphere are listed,

A. Normalized, habitualized activities; cognitive appraisal, subception;

B. Nonverbal or preverbal concepts, un-, pre- or sub-conscious feelings and intuitions;

C. Is synergetic, holistic, instantaneous in the time it takes to react; can process simultaneities;

D. Space, time, aesthetic and artistic endeavors; all non-verbal activities.

Completing the diagram is another double-headed arrow--to the old brain, and from the old brain back to the right hemisphere. Take note: an arrow leads to the left hemisphere from the old brain, but not from the left hemisphere back to the old brain.

I believe no one would argue that researchers and educators have traditionally emphasized left-brain functioning. Two quotes: "Our educational system as well as science in general, tends to neglect the nonverbal form of intellect. What it comes down to is that modern society discriminates against the right hemisphere." (R. W. Sperry) "Both /sides/ are essential to the completeness of the human reason. These important functions of the machine have all to be raised to their highest and finest working-power, if the education of the child is not to be imperfect and one-sided." (Sri Aurobindo, yogic philosopher, 1910.)

Subception (in the list, right hemisphere) leads us to the original title of this presentation. "Subception is

largely a right-hemisphere mode that occurs so quickly (because of the unique processing possible there) it often seems like inborn knowledge, insight, inspiration, or intuition. The 'in-' used in each expression is probably more than coincidental." (Regelski) The child's subception would seem to be the kinesthetic and aural input and response--the spontaneous input and response--not yet processed by the left brain. It is easy to imagine how, after many and varied opportunities to experience such right-brain activities, the left brain begins to organize/sort them into discrete concepts of the elements of music. I see this process as another way of understanding Bruner's model, which defines learning as transferring from one mode of knowing to another: enactive to iconic. It is most certainly the logical explanation, the rational foundation, for Jaques-Dalcroze's Eurhythmics (which will be mentioned later.)

We must remember, too, that the right brain processes are directly connected, in both directions, with the old brain functions: instincts, intuitions, emotions, motivational impulses, and so on. Logically, then, the doing-feeling-thinking experiences in movement-music are primary preverbal connections to further analytic and gestalt learning. They provide, as well, a structure for purposive, life-long, music learning.

The child's perceptions are egocentric, dynamic and wholesomely autistic. The identification of these same traits in the adult artist have been noted by experts in

varied fields: Millie Almy, Rudolf Arnheim, Harold Taylor--and Aronoff!! Here's to aesthetic emphases in education in early childhood: it's never too early to begin!

"It's never too early to begin!" Certainly you don't have to be reminded of the importance of the early years in all aspects of learning. Longitudinal research substantiates this notion, in fact declares it to be especially so in music learning. (Greenberg) Most two- and three-year-olds already have a wide and varied experience in music from informal encounters at home. The research underscores the need for planning to provide focus, to facilitate musical development in later years. (Michel)

Purposeful musical perception experiences lead directly to the child's acquisition of concepts concerning the elements of music. Music educators and researchers maintain overwhelmingly that a structure of these concepts is essential for further growth. Of course, consideration of the maturational and general conceptual levels of the learner is as crucial here as in any other discipline area.

Can the non-music specialist make this happen? Absolutely! The teacher must be convinced that aesthetic education is valid on its own. When we talk of aesthetic education we're talking about learning through rudimentary sensations, including the affective component, as through kinesthetic and aural experiences in movement-music. But the teacher must aim beyond the traditional goals of social skills, of

release of energy after quiet seat work, of language development (from the words of songs) and of a fun activity after "serious" learning.

We are ready to deal directly with the learning connection of movement and music. Music has its roots in movement. The child's body movement becomes the medium, the instrument for learning. Observing his unselfconscious movement in play, we accompany the child's movement with an instrumental rhythm, a song, an improvised chant. As he moves in many different ways, we provide matching sounds. The child is always in time with the music because he establishes the beat! When the procedure is reversed, the music starts and the child moves accurately and appropriately, drawing on his accumulated experience. These are the beginning strategies of Emile Jaques-Dalcroze (1875-1950), a Swiss musician and educator who evolved eurhythmics (his term)--strategies for constant interaction between aural awareness, movement and improvisation.

Individual, subjective responses in the emotional and physical realms allow for total spontaneity as a variety of music-movement activities focus on the basic concepts of the elements of music. The teacher needs only to know the most obvious contrasts in the use of movement and sound to begin: Is the child using lots of energy, or little? Subsequently, will the music be loud or soft? In another experience, is the sound/the movement slow or fast? Then, is the sound/the movement same or different in shape/in flow?

In each instance, the individual child's emotional state is stressed: "How does it make you feel when the music is so loud/soft/slow/fast and so on?" The questions may elicit a gesture, a facial expression, sometimes a verbal response.

Children naturally join in the singing of simple folk songs, especially if they have been involved physically as they hear the melody over and over. ("Move the way the music tells you!") There need be no wrong ways of moving because the song or rhythm pattern may always be adjusted to "the different drummer."

Through my own action research, I have found that four-year-olds (from many different home environments) were able to perceive basic aspects of the elements through the use of movement-music strategies. Their verbal responses demonstrated that they were beginning to acquire music concepts:

RHYTHM

Beat: "When you listen, you can keep clapping or walking to the music, and it feels right."
Even sounds equalling less than a beat: "You can run or tap faster than before, and it still feels right."
Accent: "When you're walking or clapping, some steps or claps want to be harder."
Meter: "A big swing fits the music, too."
Shape: "Long's and short's mixed."
Patterns: "Long's and short's mixed, and you can do it again the same way."
Rests: "Little places have no sound; you stop and listen for what comes next: you have to be ready."

Prose rhythm: "Some sounds are longer because their words need more time." "Some last longer because it takes more space to play them." "You don't feel like clapping or anything; you just feel like listening to the shape of it."

AGOGICS

Tempo: "The fast or slow of the music."
Changing rate: "It got faster, little by little." "It got slower, little by little."

MELODY

Pitch: "The low or high of the sound."
Direction: "The music is going up." "Now it's going down." "It is staying on a level."
Shape: "You can tell a song by the way it goes up and down." "Sometimes you can tell a song without the up and down, when somebody just claps the way it is."

TONE QUALITY

Voices: "Every person sounds different; when you close your eyes you can tell who it is." "You can talk and you can sing." "You can sing words or 'la-la" or 'oooooo'." "You can hum and you can whistle." "You can make things sound smooth or jerky."
Raw sounds: "You can clap lots of ways that sound different, with both your hands or on different parts of yourself." "Hiss; buzz, cluck your tongue; snap your fingers." "Tap a wine glass with a fork." "Tap the table/floor/shelf with a pencil." "Some people can make a sound blowing over the top of a bottle; some can blow through their teeth."
Nonpitched percussion: rhythm sticks; wood block; different sizes of drums; tambourine; jingle bells; triangle; cymbals.

Pitched percussion: melody bells; piano.
Stringed instruments: violin; guitar.
Wind instruments: recorder; clarinet; trombone.

DYNAMICS

Soft and loud: "The music is soft, gentle." "The music is loud, strong."
Changing: "The music is getting louder, little by little." "The singing is softer and softer."
Accent: "It's a surprize, all in one place."

DESIGN

Repetition: "The same way over again."
Contrast: "A different sounding part."

TEXTURE

Single line: "One person is singing." "One person is playing."
Combinations: "Everybody is singing the same song." "Everybody is playing the jingle bells the same way." "He is singing and clapping/playing the song at the same time." "You can sing a song and play the drum where the words aren't; then you can hear all the words." "The piano is 'singing' the song--the teacher is doing it--and her other hand is playing other sounds to go with it."

Believing in the multi-dimensional aspects of aesthetic experiences for young children is one requisite for success. The other is the teachers' liberation of their own emotional and physical responses; only then can they be free to notice and nurture the spontaneous activities of their children into purposive, comprehensive learning.

The audience participated in a variety of illustrative examples--moving, singing and "playing" body sounds.

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